

**Notice of Allowability**

Application No.

10/829,075

Examiner

Joseph D. Torres

Applicant(s)

YELLIN ET AL.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Request for Continued Examination (RCE) filed 11/27/2006.
2. ☒ The allowed claim(s) is/are 23-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 11/27/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance

JOSEPH D. TORRES  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2100

Other \_\_\_\_\_

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit: 2133

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph Valentino on 8/22/2006.

The application has been amended as follows:

As per claim 23:

In line 3 of claim 23, the phrase "from the encoded symbols" was inserted after "multiple symbols".

As per claim 26:

In line 4 of claim 26, the term "encoded" was inserted before "symbols".

### ***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

The present invention pertains to a method and apparatus for soft decision decoding of received data transmitted over a channel.

Claim 23 recites various features:

"receiving a packet of encoded symbols; jointly quantizing multiple symbols from the encoded symbols; decoding the jointly quantized symbols to obtain a result; and decompressing the result into individual decoded symbols".

Art Unit: 2133

The Prior Art of record teach and, in particular, Kobayashi teaches receiving encoded symbols (Figure 14 B in Kobayashi teaches a decoder in a receiver for receiving a packet of encoded data); quantizing the encoded symbols to obtain quantized symbols (col. 6, lines 16-26 in Kobayashi teach that the AZD unit in Figure 14 B of Kobayashi is a quantizer for assigning an quantized estimate from a finite range of values to a received value that has an infinite range of values. However, the Examiner asserts that Joint quantization is a compression technique typically used for encoding speech or audio data prior to error correction encoding and prior to transmission. The prior art are not concerned with and do not teach, suggest, or otherwise render obvious the use of joint quantization of multiple symbols in a soft decoding processing unit as taught by claim 23. Hence the prior art taken alone or in any combination fail to teach the claimed novel feature in claim 23.

Claim 26 and 29 recite similar features as in claim 23.

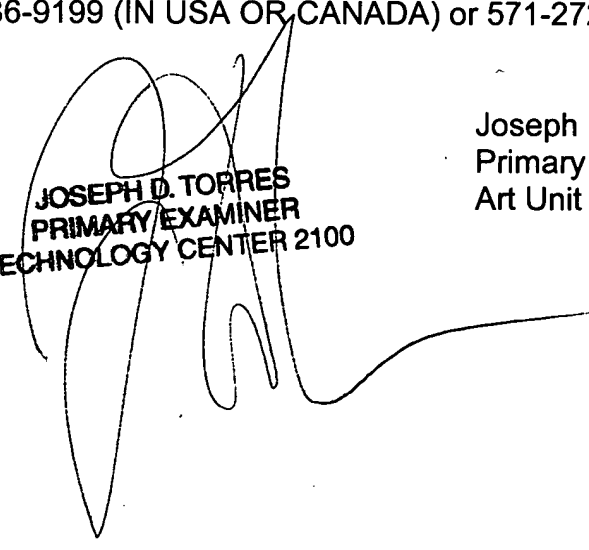
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

Art Unit: 2133

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JOSEPH D. TORRES  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2100

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit 2133